

## **SPECIFICATION**

### **TITLE**

#### **"ANTI-CLOG SHAKER SYSTEM"**

### **BACKGROUND**

When salt shakers, grated cheese shakers, or other types of food supplements in the nature of granular or flake particles are provided in shakers, moisture can cause the particles to adhere to one another, thus impeding exit of those particles when the shaker is inverted. Typically, shakers have covers which may be fastened by screw threads or the like onto the top of the shaker container, and a plurality of apertures, typically in a grid-like pattern, are provided in the cover. The particles within the shaker when they bind together to one another are precluded from passing through the apertures when the shaker is inverted and shook.

### **SUMMARY**

It is an object to solve the above-mentioned problem.

An anti-clog shaker system and method is provided wherein a shaker container has a cap, and the cap has a surface with a plurality of apertures through which particles which are to be contained within the container will pass when the shaker container is inverted. An agitator comprising a shank having at least one protruding element, rotates to break up particles in the shaker container. A winder is connected to the flexible agitator for rotating the mixer. A wiper element is connected to the agitator so that as the winder is rotated to rotate the agitator, the wiper element also wipes away particles which may adhere in the region at the apertures of the shaker cap.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a side view of the shaker container and cap cut-away to show the anti-clog shaker system;

FIG. 2 is a top view showing a wiper of the anti-clog shaker system; and

FIG. 3 is an exploded side view of the anti-clog shaker system with the shaker container removed for viewing ease.

### **DESCRIPTION OF THE PREFERRED EMBODIMENT**

For the purpose of promoting an understanding of the principles of the invention, reference will now be made to a preferred embodiment illustrated in the drawings and specific language will be used to describe the same. It will nevertheless be understood that no limitation of the scope of the invention is thereby intended, such alterations and further modifications in the illustrated device, and/or method, and such further applications of the principles of the invention as illustrated therein being contemplated as would normally occur now or in the future to one skilled in the art to which the invention relates.

FIG. 1 generally illustrates at 10 the anti-clog shaker system. The shaker system comprises a shaker container 8 typically having screw threads 8A or some other connection system for receiving or attaching to a shaker cap 9 having connection threads 9A for mating with the connection threads 8A of the container. Of course, alternative forms of attachment between the cap and the container may also be provided.

Shaker cap 9 has a plurality of apertures or slots such as 9B typically arranged in a pattern. Frequently, the shaker cap 9 is dome-shaped, although it might be flat or have other slopes.

The container 8 typically contains granular, flaky, or other various shaped particles such as salt, grated cheese, or other types of food additives or the like. In humid conditions or for other reasons, these particles may stick to one another, preventing or limiting discharge of the particles from the shaker when the shaker is inverted and shook.

As shown in FIGS. 1 and 3, an anti-clog mechanism which is part of the anti-clog shaker system comprises at the leading penetrating end of the mechanism an agitator 11 preferably formed of plastic and having a shank 11A, a threaded hole 11B in one end face, and a flat planar tip 11E with a tri-point termination for penetrating into the particles at the end of the shank 11A. A tapering portion 11D provides a transition surface to the tip 11E from cylindrical portion of the shank 11A. The shank 11A also has a grinding screw-like thread 11C at the periphery of the shank 11A.

A winder stud 12 has a central cylindrical portion 12B with a threaded first attachment element 12A at one end and a second threaded attachment element 12C at an opposite end of the central portion 12B. The threaded attachment element 12C threadedly engages with the threaded hole 11B of the shank 11A.

Attached to the central portion 12B is a wiper element 13 having a wiper blade 13A as shown most clearly in FIG. 2. The wiper blade 13A has

projecting dimples 13B which rub against, or in close proximity, to a bottom surface of the cap 9 where the apertures 9B are located.

The wiper element 13 also has bent ears 13C and 13D serving as mounting flanges. These flanges or ears have respective apertures 13E, 13F for receiving a rivet 14 having a head 14A and a flared-out portion 14B. Rivet 14 is received through aperture 12D in central portion 12B of winder stud 12.

The first attachment element 12A receives thereover a nylon washer 15, and passes through an aperture 9C in the shaker cap 9, through a nylon washer 16, and then through nylon washer 17. The first attachment element 12A is threadedly engaged with threads 18A of a hole 18B at an attachment end of a winder 18. Other methods of attachment may be employed between the winder 18 and the winder stud 12.

Preferably the washer 16 is nylon, the rivet 14 is stainless steel, and the winder 18 is a bent metal rod or wire. In the preferred embodiment, the winder 18 is formed in an inverted triangle shape to serve as a handle.

In the preferred embodiment, the anti-clog shaker system comprises a salt shaker. When the winder 18 is turned, the wiper blade 13A rotates so that the dimples 13B clear out adhered particles in the region of the apertures 9B. At the same time, as the agitator 11 rotates, it breaks up particles, such as salt particles, and allows them to freely flow when the shaker container 8 is inverted and shook. Thus the particles may then freely pass through the apertures in shaker cap 9.

Although the agitator is shown as having a screw thread on the shank, the agitator may take other forms for breaking up the particles when the mixer is rotated, such as providing projecting elements from the shank.

While a preferred embodiment has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the spirit of the invention both now or in the future are desired to be protected.